ANACONDA COPPER MINE
Operable Unit 8 (OU-8)
Proposed Plan Meeting
December 12, 2016

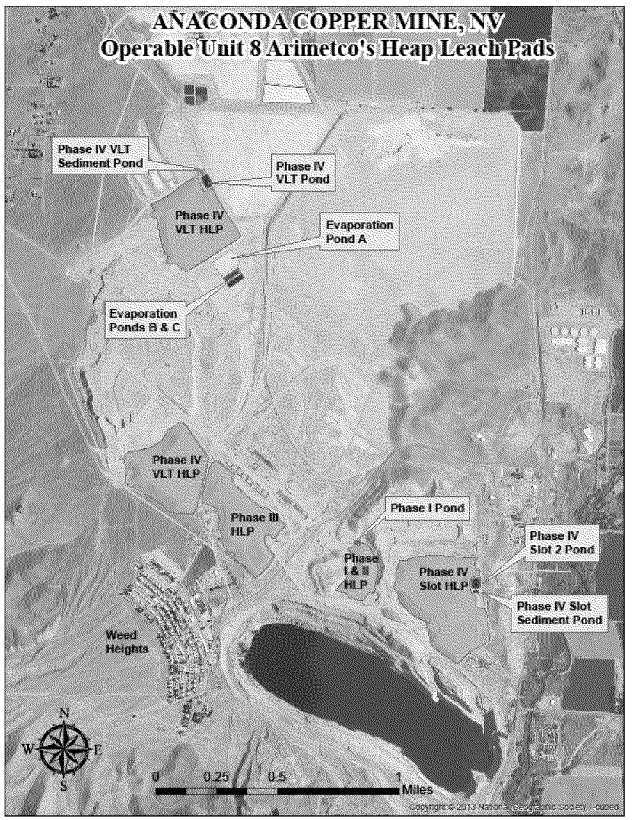
Anaconda Mine OU-8 Proposed Plan Public Meeting and Comment Period

Agenda

- Welcome
- Presentation
- Questions and Answers
- Public Comments
- Adjourn

What are the Issues?

- Acidic drain-down fluids containing elevated Total Dissolved Solids from OU-8.
- Heap Leach Pad (HLP) fluids continue to accumulate in the Fluid Management System (FMS) evaporation ponds.
- The ponds are expected to reach capacity in 2-4 years.
- Repeatedly constructing new evaporation ponds is not a sustainable, fiscally responsible long-term remedy to manage the drain-down fluids.



OU-8 Components

OU-8 VLT HLP 4-Acre Evaporation Pond

June 2009

October 2013

Pond Constructed in 2008, out of capacity by 2012

Contaminants of Concern (COCs)

Contaminants of Concern

Comparison of Analytical Results from Drain-Down Fluids with Maximum Contaminant Levels **(MCLs)**

Analyte	Range of Detected Concentrations[a]	Primary MCL (µg/L)	State of Nevada Secondary	Federal Secondary
Aluminum	9,000,000 – 27,000,000	NA	200	50 – 200
Antimony	160 – 200	6	NA	NA
Arsenic	110 – 280	10	NA	NA
Beryllium	550 – 1,500	4	NA	NA
Boron	1,100 – 2,500	NA	NA	NA
Cadmium	170 – 420	5	NA	NA
Chromium (total)	460 – 2,100	100	NA	NA
Cobalt	28,000 – 70,000	NA	NA	NA
Copper	1,700,000 – 5,700,000	1,300	1,000	1,000
Iron	210,000 – 1,100,000	NA	600	300
Lead	Non-detect	15	NA	NA
Manganese	270,000 – 740,000	NA	100	50
Mercury	4.7 – 29	2	NA	NA
Nickel	17,000 – 41,000	NA	NA	NA
Selenium	Non-detect	50	NA	NA
Silver	50	NA	100	100
Thallium	380 – 890	2	NA	NA
Vanadium	65 – 1,100	NA	NA	NA
Zinc	26,000 – 67,000	NA	5,000	5,000

Notes:

MCL = Maximum Contaminant Level
NA = Not Available
µg/L = microgram(s) per liter

- The cancer risk to an outdoor worker is 8 in 100,000, primarily through ingestion of soil materials.
- Contaminants driving this risk are arsenic, chromium, radium-228, and uranium-238.

What are the Remedial Action Objectives (RAOs)?

- Prevent ingestion/direct contact with heap leach materials and fluids containing contaminants of concern (COCs) above human health risk-based levels.
- Minimize exposure to heap leach materials and fluids containing contaminants of ecological concern at levels that are harmful to ecological receptors.
- Maximize groundwater protection by preventing migration of COCs to groundwater at levels above maximum contaminant levels (MCLs).

The 4 Alternatives Considered and Evaluated

Alternative 1	FS Alternative 2	No Further Action Alternative
Alternative 2	FS Alternative 6a	Passive Evaporation and Top Capping of HLPs
Alternative 3	FS Alternative 8a	Passive Evaporation and Complete Capping of HLPs
Alternative 4 (Preferred Alternative)	Combination of key elements of FS Alternatives 6a and 8a, plus stormwater management.	

Alternative 1, No Further Action
-Continue Existing Activities

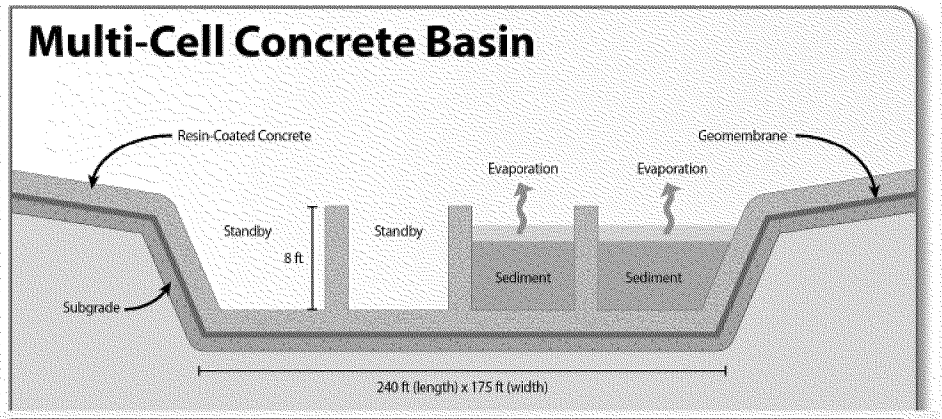
- Collect drain-down fluids
- Maintain collection ditches
- Passive evaporation in ponds
- Wildlife deterrence
- Access control

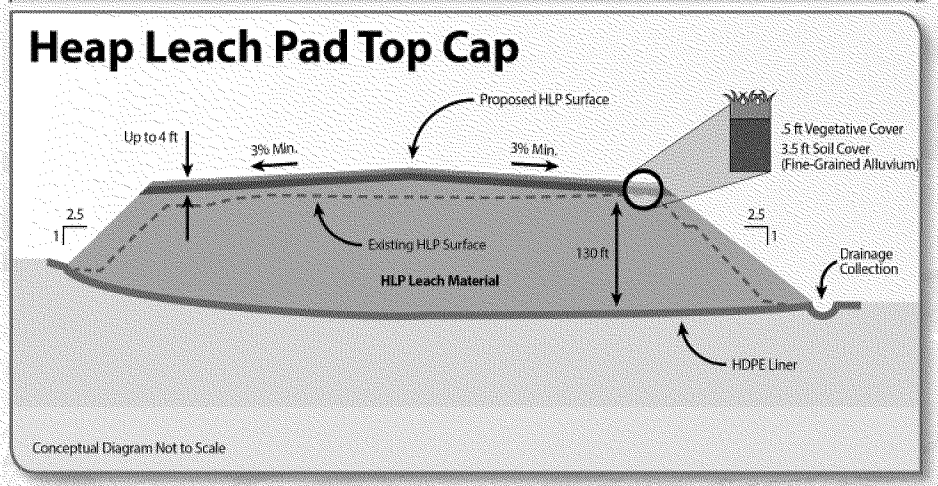
Capital Cost: approximately $1,740
Annual O&M Costs: approx. $168,500
Total Costs: minimum $2.1 million
(30-year Net Present Value)

Alternative 2 –Passive Evaporation & Top Capping of HLPs

- Existing activities, plus:
- Close existing ponds except 4-Acre Pond
- New concrete basin
- New solids repository
- Cap (4 ft. thick) tops only of each HLP

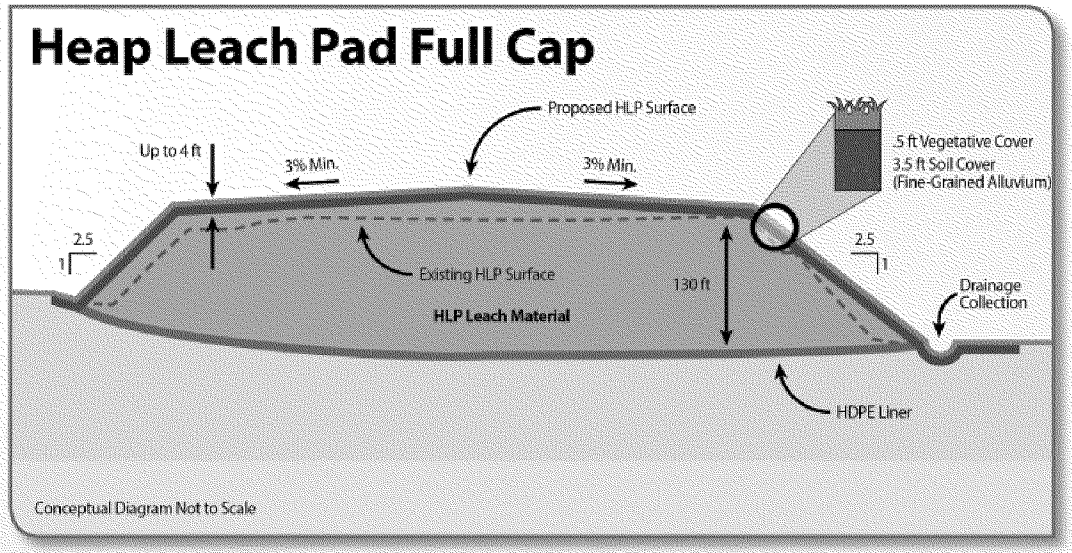
Capital Cost: minimum of $21.1 million
Annual O&M Costs: approx. $686,300
Total Costs: minimum $29.7 million
(30-year Net Present Value)





Alternative 3 –Passive Evaporation and Complete Capping of HLPs

- Existing activities
- Close existing ponds except 4-Acre Pond
- New concrete basin
- New solids repository
- Cap (4 ft. thick) on top and sides of each HLP
- Top cap spillways to collect/convey stormwater



Capital Cost: minimum of $51.7 million
Annual O&M Costs: approx. $519,200
Total Costs: minimum $58.2 million
(30-year Net Present Value)

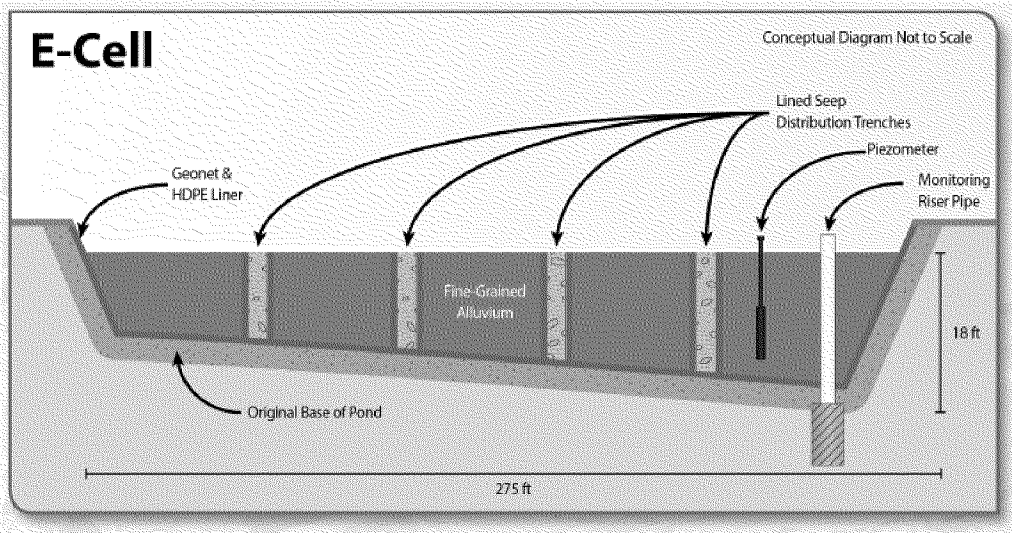
Alternative 4, *Preferred Alternative*
-Modified Evaporation, Complete Cap, E-cells, Stormwater

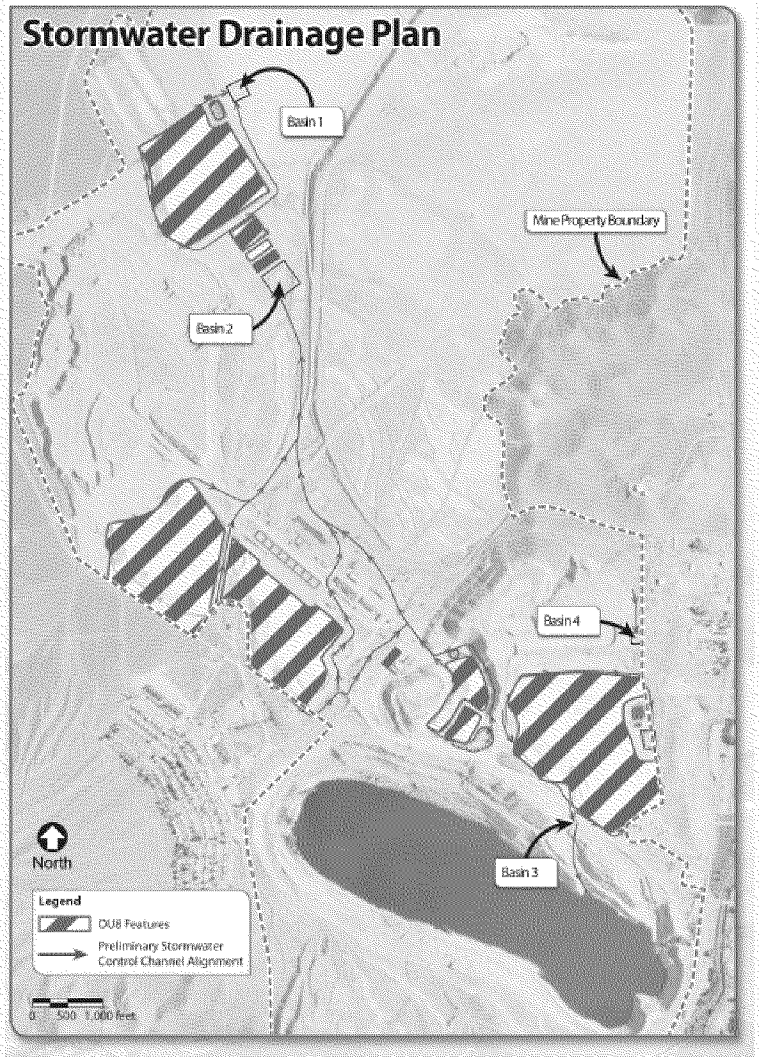
- All components of Alts 1, 2 & 3,
- Except: no concrete basin required with 4-Acre Pond closure, and 2' thick cap instead of 4' thick

Capital Cost: minimum of $30.4 million
Annual O&M Costs: approx. $381,700
Total Costs: minimum $36.1 million
(30-year Net Present Value)

- Plus: convert most HLP ponds to E-Cells
- Close 4-Acre Pond in place or reprocess contents
- Stormwater Plan: 4 new detention basins, piping, open channels, designed to connect to future adjacent areas stormwater features

Alternative 4, Preferred Alternative –Select Features





Alternative Selection Criteria

1. Protection of human health and the environment
2. Compliance with Applicable or Relevant and Appropriate Requirements
3. Long-term effectiveness and permanence
4. Reduction in toxicity, mobility and volume
5. Short-term effectiveness
6. Implementability
7. Cost
8. State acceptance
9. Community acceptance

Alternative 1 Evaluation

- Not protective of human health and the environment, as exposure to fluids/solids is not eliminated
- The risk of leaks and potential groundwater contamination would be reduced, but not eliminated
- Precipitation infiltration would not be reduced and generation of drain-down fluids would continue
- Additional ponds would need to be constructed within the next 2-4 years, and in perpetuity, to accommodate build up of solid precipitates and fluids accumulation
- Does not meet Nevada mine closure standards and requirements
- Long-term effectiveness would not be achieved.
- Costs of new pond construction is not included in this alternative.

Alternative 2 Evaluation

- More protective of human health and the environment, as top cap reduces exposure potential
- Reduction in drain-down fluids reduces the risk of leaks and potential groundwater contamination, but complete groundwater protection from potential releases would not be achieved
- Precipitation infiltration and generation of drain-down fluids would be greatly decreased
- Contaminant mass and volume would not be greatly reduced
- More closely meets Nevada mine closure standards and requirements, but dependent on liner conditions and FMS portions
- More difficult to implement than Alternative 1
- Capital costs much greater than Alternative 1, but < Alts 3, 4
- Estimated O&M costs > any of other alternatives

Alternative 3 Evaluation

- More protective of human health and the environment, as full HLP cover reduces potential contact with solids and fluids
- The risk of leaks and potential groundwater contamination are greatly decreased, but contaminant mass & volume may remain
- Long-term generation of drain-down fluids greatly decreased
- 4'-thick complete cover would require substantially more borrow material than Alternatives 2 or 4
- More closely follows Nevada mine closure standards and requirements, but only minimal stormwater routing included
- Long-term effectiveness would be increased
- More difficult to implement than any of the other alternatives
- Capital costs greater than any of the other alternatives
- Estimated O&M costs substantially greater than Alternative 4

Preferred Alternative Alternative 4, Evaluation

- RAOs would be achieved
- Most protective of human health and the environment, as complete cover limits exposure to drain-down fluids and solids
- The risk of leaks and potential groundwater contamination further reduced
- Infiltration virtually eliminated & generation of drain-down fluids further reduced
- Stormwater controls isolate non-contact fluids & decrease risks
- 2'-thick complete cover would require substantially less borrow material than Alternative 3
- 2'-cap meets Nevada mine closure standards and requirements
- More implementable than Alternatives 2 or 3
- Capital costs substantially less than Alternative 3
- Estimated O&M costs significantly less than Alternatives 2 or 3

We Want Your Input!

- ✓ 30-day Public comment period runs from November 21-December 21, 2016.
- ✓ You can make a verbal comment today which will be transcribed verbatim. There is a 3-minute time limit for verbal comments.
- ✓ You can write a comment and return it in person today, or by mail, email or fax to the contact below:

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Questions and Answers

and

Public Comments